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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,209	04/13/2004	Yoshio Saito	9281-4828	4058

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Chicago, IL 60610

EXAMINER

NGUYEN, KHIEM M

ART UNIT	PAPER NUMBER
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2839

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,209

Applicant(s)

SAITO ET AL.



Examiner

Khiem Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1- 4 are rejected under 35 U.S.C. 102(b) as being anticipated by DiStefano et al. (6,274,820).

DiStefano et al. (figures 19-20) discloses an electronic circuit unit, comprising a circuit board 260 having an upper face on which electronic components are mounted (see column 1, line 18 and column 4, lines 1-7) and a lower face having a plurality of first land portions 262; and a connector member 222 disposed at a lower portion of the circuit board;

Wherein the connector member has an insulating resin portion 218, a metallic shield plate 200 embedded in the insulating resin portion, and connector terminals 233 which are provided with first terminals 254 protruding from an upper face of the insulating resin portion and second terminals 254 protruding from a lower face of the insulating resin portion; and wherein the connector terminals are configured such that the first terminals over the upper face are electrically connected to the first land portions and the second terminals over the lower face are electrically connectable to second land portions of a second circuit board 260 which can be readable as a mother substrate.

For claim 2, the shield plate 200 has a plurality of cutout portions, and the connector terminals 233 are arranged to pass through the cutout portions vertically without contacting the shield plate.

For claim 3, the connector member has earth terminals 252 which are electrically connected to the shield plate and are electrically connectable to the second land portions of the second circuit board.

Regarding claim 4, figures 22-24 of DiStefano et al. discloses that the connector terminals are made of metallic plates, and are formed by the second terminals deformably extending from an outer surface of the insulating resin portion.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-6 rejected under 35 U.S.C. 103(a) as being unpatentable over DiStefano et al. in view of Kent (5,175,409) and Fan et al. (6,471,525).

DiStefano et al. discloses the claimed electronic circuit unit of the instant invention as discussed in the previous paragraph, except for the features that the first land portions and the first terminals are soldered; and the circuit board includes connecting pieces having first connections soldered to the first land portions, second connections soldered to the first terminals, and legs linking the

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first and second connections; and the first land portions and the first terminals are soldered by the legs while separated.

Kent discloses that that it is well known to provide solder material 228 or to directly solder conductors of a flex circuit 208 to a component or circuit board (see figure 12). Fan et al. discloses connecting piece 59 having leg linking first and second connections between first land portions 28 of the circuit board 34 and first terminals 66 of interposer 60.

Therefore, it would have been obvious for one of ordinary skill in the art to provide connecting pieces having first connections soldered to the first land portions, second connections soldered to the first terminals, and legs linking the first and second connections; and the first land portions and the first terminals are soldered by the legs while separated for the electronic circuit unit of DiStefano et al. in view of the teachings of Kent and Fan et al. The use of solder for securing terminals to circuit board is well known and would provide a more secure and permanent electrical connection; to use separate connecting pieces for soldering the terminals to the circuit board would seem to be more advantageous than directly soldering the terminals to the board since the connecting ^{pieces} would provide more surface area for applying the solder material.


Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inasaka, D'Amico, and Arisaka are further cited to show electronic circuit substrates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khiem Nguyen whose telephone number is 571 272-2096. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Khiem Nguyen
Primary Examiner
Art Unit 2839